WORKSHOP
Tools to build TB IRP trials: The EU-PEARL approach
The EU PEARL IMI Project aims to accelerate the uptake of Platform Trials across Europe. The EU-PEARL TB Work Package intends to build an Integrated Research Platform (IRP) to facilitate drug/regimen development for TB. To achieve this objective, we developed a novel design and Master Protocol template to accelerate drug registration, reviewed novel biomarkers highly predictive of clinical outcome and we are defining a regulatory pathway to build the most effective trial design which will be presented during this workshop.

After attending this workshop participants will be able to:
- Gain some knowledge on the EU-PEARL most recent results in designing a TB adaptive platform trial,
- Gain knowledge in developing a TB Master Protocol that grant and favour active community participation and present the tools developed for capacity building and clinical trial sites assessment.

Session sponsor: EU-PEARL: EU Patient-Centric Clinical Trial Platforms

Chairs: Daniela Maria Cirillo, (Vita Salute University San Raffaele, Milan, Italy) and Adrian Sanchez Montalva, Infectious Diseases Department, Vall d’Hebron University Hospital, Global Health Program from the Catalan Health Institute (PROSICS) Barcelona Spain

Coordinators: Francesca Saluzzo, (Vita Salute University San Raffaele, Milan, Italy)

Target audience: TB clinical trialists, Community representatives, Statisticians, Drug developers and EFPIA partners, Regulatory experts.
Daniela Maria Cirillo (Italy): Introduction on EU-PEARL and the Tuberculosis work package

Introductory presentation on the EU-PEARL concept and the work of the TB workpackage:

The EU PEARL IMI Project aims to accelerate the uptake of Platform Trials across Europe. The EU-PEARL TB Work Package intends to build an Integrated Research Platform (IRP) to facilitate drug/regimen development for TB. IRPs can facilitate the treatment development pathway by gathering together all relevant stakeholders and offering a network of researchers and sites ready to implement clinical trials, offering the patients a ‘one stop shop’ for the newest treatments. To achieve this objective, we developed a novel design and Master Protocol template to accelerate drug registration, reviewed novel biomarkers highly predictive of clinical outcome and we are defining a regulatory pathway tools to build the most effective trial design.

Tobias Mielke (Germany): A new adaptive design for TB platform trials 20

Design considerations on Platform Trials for Tuberculosis: the EU-PEARL approach

Operational considerations on platform trials will be taken into account in designing efficient and effective trials. This presentation will showcase the iterative process of moving from a simple, modestly efficient design to a complex innovative design with multiple interim analyses, leading to some potential acceleration in development times.

Norbert Heinrich (Germany): Master Protocol for a TB IRP 20

Presentation on the main key distinctive features of the EU-PEARL TB Master Protocol

The EU-PEARL project aims to create TB specific IRP framework components including Master Protocol Templates (MPTs). Based on a preliminary version of a generic MPT developed by the project team, a tailored protocol template to plan a TB platform trial(s) is currently under development. The development of a TB MPTs and related Intervention Specific Appendixes (ISA) templates will allow trialists and consortia who are developing their own master protocols to have a base to start from, with guidance on how to populate the different sections and subsections of the protocol. The key differentiating features of a TB MPT, including the recognized need to embed community participation and contribution into the different MPT sections will be discussed in detail.

Juan Espinosa Pereiro (Spain): Capacity building and sites assessment tools 20

Presentation of the EU-PEARL Capacity Building and Assessment Handbook for site readiness

There is no tool available for evaluating the capacity and preparedness of trial sites to conduct phase II TB drug development trail within the IRP environment. We reviewed current literature and guidelines available from the International Conference on Harmonisation, Good Clinical Practice and Good Laboratory Practice, World Health Organization, European Medicine Agency and Food and Drug Administration regulations, and adapted them to the operational requirements for an IRP and of adaptive trial design.

Karin Rombouts (Belgium): Regulatory considerations for a TB Platform Trial

Presentation on the EU-PEARL experience in developing a plan for regulatory consultation

Invited panellists: Statistician: P. Phillips (UCSF); Community perspective: S. Dressler and E. Tavora dos Santos Filho (EU-PEARL Community Advisors); Pharma perspective: D. Barros (GSK); Drug development: U. Simonsson (Uppsala University) and B. Laughon (Stop TB); Regulatory perspective: Marco Cavaleri (EMA): (Roundtable on the viability of IRP as a reliable pathway for regulatory approval of new drugs / regimen to fight against TB)

Are IRP attractive to the pharma industry? Does IRP comply with all the requirements from the community perspective? How drug approval can be accelerated without compromising community safety and trust? Would IRP accelerate and facilitate regulatory approval of new drugs? Which barriers / hurdles do you foresee from your area of expertise? How can we overcome them?
**Daniela Maria** Daniela Maria Cirillo MD, PhD, board-certified clinical microbiologist, Head of the EBPU, San Raffaele Scientific Institute, Milan. Head of the Milan TB Supranational reference laboratory and WHO collaborating Centre for TB Laboratory Strengthening. Director of the ESCMID Collaborating Centre. Research interests: mechanisms of detection of drug resistance in MDROs and mycobacteria and application of NGS based technology in clinical microbiology. Co-Chair of the New Diagnostic Working Group of the StopTB partnership, PI of European Laboratory Initiative. Elected member of the Disease Network Coordination Committee for Tuberculosis at ECDC. President of European Society of Mycobacteriology. Awardee of G Middlebrook prize in 2017.

**Adrian Sanchez Montalva** Adrian Sanchez Montalva, MD, PhD is an infectious diseases specialist with experience in Tropical Medicine and Mycobacterial infections. Dr Sanchez Montalva research topics are on Tuberculosis and Tropical diseases, with the main focus on designing new diagnostic tools and optimizing treatment options. He has participated in several internationally supported projects and published more than 120 manuscripts in international journals.

**Tobias Mielke** Tobias Mielke works as Scientific Director in Janssen’s internal statistical consulting group. His primary consultancy responsibilities are on adaptive study designs, the handling of multiplicity and statistical modelling in general. Tobias joined Janssen in 2018 from ICON Clinical Research, where he implemented adaptive dose ranging designs. In his consultancy roles at ICON and Janssen, he supported many innovative study designs projects, including: inferentially seamless Phase 2/3 designs, adaptive Phase 2 Dose-Finding designs with MCPMod, Phase 1/2 PoC Dose-Finding designs using Bayesian Go/No-Go criteria and designs with adaptive endpoint selection. Tobias holds a PhD degree from Otto-von-Guericke-Universität Magdeburg in Germany.
Norbert Heinrich  Norbert, MD is a paediatrician and a unit head for TB treatment and diagnostic trials at LMU Hospital, Munich, and the German Center for Infection Research. He led the PanACEA MAMS multi-arm multi-stage trial and now the oxazolidinone trials of the consortium. In addition, he is participating in paediatric and adult diagnostic trials RaPaed and ERASE.

Juan Espinosa Pereiro  Juan Espinosa Pereiro, MD. Infectious Diseases Specialist. PhD candidate at the Universitat Autònoma de Barcelona. Working in the Vall d'Hebrón University Hospital as Infectious Diseases, Tropical Diseases, and Emergency Medicine attendant. He is a collaborating investigator in an H2020-RISE project (EUSAT-RCS, grant number 823890) and an IMI2 project (EU-PEARL, grant number 853966). Since March 2020, he has been involved in the COVID-19 response as an attending physician at Vall d'Hebron Hospital, in Barcelona, including inpatient wards and the Emergency Department. He is investigator in clinical trials on TB, NTM, and COVID-19. Involved in 18 papers in the infectious diseases field.

Karin Rombouts  Karin Rombouts is Global Regulatory Affairs Lead at Johnson and Johnson (JnJ) Global Public Health. In this role, she is leading a team of regulatory professionals and responsible for the regulatory strategies and execution within the portfolio. Karin has over 25 years of experience in the pharmaceutical industry in various functions, including statistics, project management and about 15 years in Global Regulatory Affairs. Her experiences are mainly within the area of Infectious Diseases, primarily HIV and Tuberculosis. She has worked on products through all stages of development, initial registrations, launch and post-marketing activities. She is closely collaborating with the WHO and involved several external collaborations and consortia.